The Blue-Eyed Brimstone and the Brimstones' Ball

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Our Editor's intriguing note (Vol. 87, p.231) on the "Papilio ecclipsis" hoax, when that name was given to a specimen of *Gonepteryx rhamni* (L.) which had been decorated with blue markings, gives food for thought. Who was pulling whose leg?

The insect was described and validly named in a thesis (1763 : 406) prepared by Linnaeus for his pupil Boag Johansson to publish and expound. Remarkably, it was not the only rogue butterfly described here, for only three species before it came "*P. strilidore,* from Pennsylvania", an insect never since identified. With its outlandish name and peculiar descrition, was that another hoax, and were these two hoaxes devised one by the Master and one by the pupil? Two points of possible significance are that the "type specimens" of *P. ecclipsis* still exist in Linnaeus's collection, but none of *P. strilidore;* and the fact that in his next and final work four years later, Linnaeus (1767 : 765) retained *P. ecclipsis* as valid but dropped all mention of *P. strilidore.* These views were followed by his reviser Gmelin (1790 : 2273) and by Fabricius (1775 : 478, 1781 **2**:50, 1787 **2**:24), but then came the denouement. Having examined the "types" in London, Fabricius (1793 **3**:211-212) firmly placed *P. ecclipsis* as a synonym of *P. rhamni,* adding "appears identical, artificially spotted".

But this was not the only blue-marked Brimstone. Within a month of our Editor's note came an extraordinary twist to the tale. There appeared in the local bookshop, on the dust-cover of a new book, a coloured reproduction of an old French print. A life-sized and realistic Blue-Eyed Brimstone perches on an old-fashioned double blue Hyacinth, alongside a blue Love-in-a-Mist (*Nigella*) with its yellow anthers, while an acrobatic caterpillar spans the tips of two Hyacinth leaves, nonchalantly nibbling one. Many expensive reproductions of the larger works of early botanists have lately appeared, but this more modest book (Coats, 1975: plate 37 and jacket) gives exquisite examples from the smaller publications. The Blue-Eyed Brimstone was originally depicted by Nicolas Robert (1614-1685, of Burgundy and Paris) in *circa* 1660!

So was there really a Blue-Eyed Brimstone in early times, and was *P. ecclipsis* a sound name after all, not based on the substitute artefacts in Coll. Linn.? Alas, no! I sent a photograph of the print to our Editor, who found it did not agree with the Linnaean specimens. The explanation must be more prosaic. Robert's book was of "Various Flowers", and the insects (although excellent) were mere incidentals. The flowers in the engraving needed shades of just blue, green and yellow, perfect for the larva and the easily-recognised Brimstone except for its two red spots; those were given the ready-to-

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hand blue by the colourist, and *ecclipsis* must remain under a cloud.

But what a perfect pet the Brimstone is! No "cannibalism", none of this wandering; no trouble at all. On 16th June 1972 I was just going out shopping in Tring when I met a female at my front door. Doffing my hat, I hustled her in and unceremoniously bundled her under a goldfish bowl (inverted), then fetched her a twig of *Rhamnus catharticus* from a bush about a mile away. Shopping completed, I returned to find twenty eggs, so set her on a flower in the garden and wished her well.

Despite a very cold spell at this time, the eggs all "hatched" on 29th June and I was ready for this with three (later increased to five) jam-jars each with a twig of *Rhamnus* and some charcoal to keep the water sweet for up to a fortnight. I soon found that I had some "characters". First, there were the "twins", who invariably fed off the same leaf whereas all the other 18 were solitary. Then there was "Lonely", who looked very sick each time the others shed their skins, and only followed suit two or three days later. A half-grown intruder arrived on the new foodplant one day but promptly died and shrivelled, leaving a skin with a large "lump". This proved to be the beautiful black and white ringed pupa of an "ichneumon" identified for me as *Hyposoter ebeninus* (Gravenhorst), said to affect *Pieris brassicae* (L.) on the continent but *G. rhamni* here; "Frank in Paris and Ernest in London" as O. Wilde has it.

Pupation took place on 25th-27th July, the "twins" simultaneously, suspended nose-to-tail under the midrib of the same leaf. Poor Lonely remained, looking sadder than ever, but I had to laugh when I saw him on 29th. He was now a pupa alright, but dangled head-down on a single, inch-long, thread. In nature, out-of-doors, he would have had a very rough time, but indoors he was fairly safe.

Emergence, and release on my *Buddleia* (two at a time lest the ubiquitous, iniquitous sparrows be alerted) took place on 15th-17th August for all except one. Knowing a neighbour was interested, I "lent" her a twig with a maturing pupa, but she absent-mindedly "sprayed" her kitchen, with fatal results. The "twins", both males, emerged and were released together. Lonely came last as usual, also a male, on 18th August. He looked entirely normal. I found him clinging to the leaf above the empty pupa-case, and regretted not having seen his trapeze act. In all, there were 10 males, 9 females.

A similar case of "twinning" larvae and pupae was recorded of a *Charaxes* species by Margaret Fountaine (see Cheesman, 1932 : 127). Both, again, were males.

The phenomenon of the football-sized swarm of about fifteen *G. rhamni* reported by Mr. A. G. M. Batten (vol. 84, p.206) from near Guildford, about 2nd April 1972 (so perhaps a month before the start of the mating season) seems to be another peculiarity of this species. I saw a probable instance of it on 7th October, about seven weeks after releasing my

brood. There were almost certainly five males in my "ball", about 80 yards from my front door, drifting slowly across a meadow at a height of about 8 feet, and disappearing into a wood. This suggests that immature males may be prone to gambol in this fashion, and that they come from the same brood. In my case that implies that 50% of the males had so assembled after seven weeks in the wild. Would as many as fifteen brethren still be able to gather like this after the winter — in sunnier Surrey?

One thing is certain; although not blue-eyed, the Brimstone is quite a character.

References

The well-known works of Linnaeus (*Amoenitates Academicae* vol. 6; *Syst. Nat.*, edn. 12 and (by Gmelin) edn. 13), and by Fabricius (*Syst. Ent., Spec. Ins., Mant. Ins.*, and *Ent. Syst.*) need no detailing here. Nor does the *Journal* cited in the first and the penultimate paragraphs. The three general works cited are:

Cheesman, E. 1932. *Insect Behaviour.* pp. vii, black, 9-189. 8°. London (Philip Allan).

Coats, Alice M. 1975. *The Treasury of Flowers.* 33 pp., 118 pls. and text, 3 pp. Index. 8°. London (Phaidon & R.H.S.).

Robert, Nicolas. *c.* 1660. *Fleurs diverses.* Col. pls. 8° (data taken from Coats). Copy in Lindley Library, R.H.S.

Practical Hints—December

The Mottled Umber, *Erannis defoliaria* (Clerck) in infinite variety with many *melanic* forms, occurs abundantly in Epping Forest. Both sexes sit about on twigs and are best collected with a hand lamp on a mild night in December after a frost (Chalmers-Hunt).

Beat *Cupressus macrocarpa* in localities along the coast from Sussex to Cornwell any time during the winter for larvae *Eupithecia phoeniciata* (Rambur). Although stated to feed on other species, it is best to keep the larvae on this pabulum in captivity (Skinner).

Search one year shoots of *Salix caprea* in December (later and the birds will have taken their toll) for the gall-like swellings formed by the larva of the Tortricoid *Cydia servillana* (Duponchel). Then stand the cut tenanted twigs in damp sand, and the moths will emerge from the middle of May. Found locally in Kent, Sussex, Hants and elsewhere in the south, but apparently becoming scarcer northwards (Chalmers-Hunt). There are many galls and swellings in sallow twigs, but the tenanted mine of *C. servillana* when the larva is about to pupate, is quite easily distinguished by the exit hole which is covered by silk mixed with reddish frass and is situated usually about 4mm. above the bud (Fassnidge).

The larvae of *Stigmella aurella* (F.) overwinter half-fed in their mines in leaves of *Rubls fruticosus.* If collected and kept in a warm room, they will feed up quickly and produce adults in a few weeks. Found commonly throughout England and wales; also in the milder parts of Scotland, but intemittently as severe winters kill the populations (Emmet).